

Parent Enabled Learning for Autism

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KEYWORDS: *Autism, Parent Learning, Android app, Customized app*

INTRODUCTION:

Autism is a neurobehavioral condition which affects social interaction and communication skills. It is a disorder which is developed from very early childhood. The communicative deficiency of the autistic kid puts him/her in a dilemma in context of social interaction. This often led the kid to total isolation from the society. However, a kid with autism spectrum disorder can be helped in various ways so that the kid can overcome his/her deficiency to certain extent. The role of the parents in this regard is huge as they are the closest to the kid emotionally. So anything that can make use of that emotional attachment to train the kid to communicate should do wonders. We used that idea to develop an android app which is a communicative app that uses parents' voice to train the kid. The idea is to use the parents' to train the kid through the android app.

MOTIVATION:

With the rapid growth of autism, the technological support has also increased in many countries. But Bangladesh is an exception in this regard. It does not have the strong infrastructure despite the humongous effort from our government. There are a very few psychiatrist or doctors related to autism in the rural areas of our country. Even in the urban areas the number of such doctors is inadequate. When it comes to autism specialist the number is even fewer. So if a kid is diagnosed with autism spectrum disorder, the guidance or assistance is very hard to get. Even diagnostic is a challenge along with the mentality of people. So if we can assist the parents to somehow train their kid to communicate so that the kid is able to live a close to normal life, it would be a huge favor to them. That motivated us to come up with such an app that takes user given pictures and voices and renders them in a way that the contents can be used to teach the kid about the object in the content.

SYSTEM CONCEPT:

The concept of our work is to utilize the power of emotional attachment to make a autistic kid trained about the communication skills. The app that we are developing has the capability to take a user given content and display it in a way that the kid can learn about the content. The user, in this case, are parents of an autistic kid would take pictures of different objects and also records the name of that object and

other details. They save those in the app and let the kid see the pictures of the objects as well as their name and details. So the kid sees these objects time after time and also listens to their name and details with the voice of their parents which are the closest voices to them. The process gives the parents the full freedom to teach their kid about anything they want to in a very specific and meaningful manner.



Figure 1: Customized Application

CHALLENGES:

We have started developing our app. For this we are extending the communicative android app in Bengali which we have developed to teach the autistic kid of our country about the daily household thing they are likely to face. We are giving the user the option to customize the app so that above discussed goals can be achieved. Having some default contents also gives the user the idea how to use the app in best way. However, we are facing lots of challenges while doing so. These challenges include different sizes and resolutions of images in different mobiles, largely increased size of the app etc. To cope with these sorts of challenges we have come up with a solution. The solution we figured out is to limit the number of photos which a user can keep saved in the app at anytime. Despite the limitation, it ensures that the app remain very user friendly, light, and useful at the same time.

CONCLUSION:

The app uses parents' voice as the emotional link to train the autistic kid. The app in other words assists parents to train their autistic kids by keeping record of the contents they are trying to teach. The process of learning through emotional attachment has proved to have a great effect on the kids.

ACKNOWLEDGEMENT:

Dr. Mohammad Sorowar Hossain
(Adjunct Scientist).